

EXPANSION NEWS on two fronts by Alternative Engineering.

1. The first bit of news has to do with the barebones keyboard. While there have been a number of inquiries for a spartan keyboard that just replaced the on board keypad, when push came to shove, the serious people, ones with cash in hand, also wanted to have expanded memory as well. They reasoned that 1800 bytes just wasn't enough to do any serious programming. So AE will produce a keyboard with RAM, 64K of it, along with the 8048 microprocessor, two RS-232 ports for printer functions, etc., the 8K Vipersoft Basic language, and a power supply - all in a cabinet. Also included is a cassette machine so that all owners will be assured of taped program compatibility.

2. The Zgrass unit will include as standard, the latest in disc technology - the 96tpi Double Side Quad Density drive now available. All other features of the system remain unchanged.

Alternative Engineering is to be commended for continuing their efforts, not visible to the rest of the world, but certainly full of frustrations in dealing with suppliers, financiers, and everyone else involved in putting together projects such as these.

PRICES for the above are \$495. for the Keyboard Expansion; and \$1495 for the Zgrass Unit. Orders with money order, cashier check, etc., are now being accepted, with units being built on a first-in, first-out basis, and delivery in a 6-8 week timeframe.

It should be noted that the Keyboard Addition is easily expanded to the Zgrass unit by plug-ins, because the motherboard, power supply, and cabinet are common to both. There will be some advertising and/or further data in the next issue.

GRAVITY You command the first fleet of interplanetary space probes. You launch them from aboard your command post on the space shuttle Enterprise. All probes are capable of hovering over any planet at 2000 feet (except Pluto) and each can escape back into space to perform gravitational tests elsewhere. The probes, however, cannot escape from the gravity and heat of the Sun. All probes that enter the solar atmosphere for tests will disintegrate, but not before sending you the data you seek. You are left, upon disintegration, with a scene of the night sky from a telescope on your space shuttle. Since you have an unlimited supply of probes, the disintegration of a few should not concern you. Begin with a probe on Earth, for reference.

Instructions: Load the program and the * array. You will see the night sky, then your exhaust, a map of the solar system with the Sun on the left, then a menu. After you choose a planet, the map reappears, and the scene shifts to the planet's surface with the probe at 2000 feet elevation. The probe will drop a weight and the adjacent clock will time its descent. Then the menu will reappear for further testing.

In actuality, this program is a segment of a larger program that will eventually explore our solar system. Readers are encouraged to develop similar 'chapters', each within the 1800 byte storage constraint, and we'll see if we can't develop a multi-loaded program, or something that could be put on a cartridge.

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1 CLEAR ;NT=0;NM=2;NV=25;BC=0;FC=7;FOR S=0TO 120;BOX RND (160)-80,RND (80)-40,1
,1,3;NEXT S;IF A=48A=0;`;GOTO 20
2 P=-27;CY=30;CX=P;PRINT " GRAVITY";CY=P;PRINT " FRED RODNEY 1984";CY=0
4 A=47;NT=9;FOR N=0TO 15;MU=*(N);NEXT N;NT=70;MU=90
5 GOSUB 79;FOR N=255TO 255STEP -1;NV=N;BOX -4,3,Nc20,Nc20,3;NEXT N;`;GOSUB 25
20 Z=0;CY=-40;PRINT ;CX=P;PRINT "1.EARTH";CX=P;PRINT "2.THE MOON
22 CX=P;PRINT "3.MERCURY";CX=P;PRINT "4.VENUS";CX=P;PRINT "5.MARS";CX=P;PRINT "6
.JUPITER";CX=P;PRINT "7.SATURN
23 CX=P;PRINT "8.URANUS";CX=P;PRINT "9.NEPTUNE";CX=P;PRINT "0.THE SUN";BC=7;FC=0
;A=KP;IF (A<48)+(A>57)GOTO 20
25 CLEAR ;GOSUB 70;FOR L=1TO 1500;NEXT L;CLEAR ;&(9)=50;IF A=47BC=0;FC=7;GOTO 40

30 FC=8;CX=-38;CY=24;IF A=48G=2;PRINT " THE SUN=28
31 IF A=49G=22;BC=167;PRINT " EARTH=1
32 IF A=50G=57;BC=0;FC=7;PRINT "THE MOON=0.16
33 IF A=51G=43;BC=22;PRINT "MERCURY=0.28
34 IF A=52G=24;BC=71;PRINT " VENUS=0.85
35 IF A=53G=37;BC=51;PRINT " MARS=0.38
36 IF A=54G=13;BC=54;PRINT " JUPITER=2.6
37 IF A=55G=20;BC=44;PRINT " SATURN=1.2
38 IF A=56G=22;BC=19;PRINT " URANUS=1.1
39 IF A=57G=18;BC=4;PRINT " NEPTUNE=1.4
40 BOX -4,1,11,1,1;BOX -4,3,3,3,1;BOX -8,2,1,1,1;BOX 0,2,1,1,1;IF A=47GOTO 65
42 FOR L=-15TO 0STEP 15;BOX 31,L,2,1,1;NEXT L;LINE -60,-30,4;LINE 79,-30,1;LINE
79,-40,4;LINE 0,-30,1;LINE -80,-40,1
43 CY=0;CX=37;PRINT " _2000";PRINT " SEC.";CX=43;PRINT "FEET";GOSUB 68;NM=2
50 FOR Y=-1TO -29STEP -1;BOX -4,Y,1,1,3;FOR B=0TO G;Z=Z+1;NV=455cG;NEXT B;CY=0;P
RINT #5,Zc60;BOX -4,Y,1,1,3;NEXT Y;GOSUB 68
60 IF A=48NT=6;`;FOR L=1TO 8;MU=90;MU=65;BOX -4,3,15,8,3;NEXT L;NT=0;NM=2;FOR L=
1TO 31STEP 2;NV=255cL;BOX -4,3,L,L,3;NEXT L;RUN
65 `;GOSUB 68;GOSUB 79;GOTO 20
68 NT=2;FOR N=1TO 5;MU=90;BOX -4,3,1,1,3;MU=65;NEXT N;NT=0;RETURN
70 &(9)=68;BC=87;&(0)=0;&(1)=0;&(2)=5;&(3)=5;NT=0
72 BOX -52,0,3,3,1;BOX -40,0,5,5,1;BOX -27,0,5,5,1;BOX -29,5,1,1,1
74 BOX -17,0,3,3,1;FOR L=-40TO 40STEP 8;BOX RND (4)-8,L,1,1,1;NEXT L
76 BOX 10,0,10,10,1;BOX 28,0,8,8,1;LINE 22,5,4;LINE 34,-6,3
78 BOX 46,0,6,6,1;BOX 63,0,6,6,1;BOX 75,0,1,1,1;CX=30;CY=-33;PRINT "MAP";GOTO A+
32
79 FOR L=1TO 700;NEXT L;RETURN
80 CLEAR ;Z=36;FOR L=67TO 105;&(9)=L;NEXT L;GOTO 30
81 BOX -27,0,3,3,3;RETURN
82 BOX -29,9,1,4,3;RETURN
83 BOX -52,0,1,1,3;RETURN
84 BOX -40,0,3,3,3;RETURN
85 BOX -17,0,1,1,3;RETURN
86 BOX 10,0,6,6,3;Z=14;RETURN
87 BOX 28,0,6,6,3;RETURN
88 BOX 46,0,4,4,3;RETURN
89 BOX 63,0,4,4,3;RETURN

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*(0)=108	*(3)=77	*(6)=108	*(9)=73	*(12)=108	*(15)=85
*(1)=71	*(4)=83	*(7)=79	*(10)=79	*(13)=108	
*(2)=108	*(5)=108	*(8)=77	*(11)=85	*(14)=108	